

## **REMARKS**

### **I. INTRODUCTION**

Claims 1-10 are pending in the present application. Applicants would like to thank the Examiner for indicating that claims 2-6 contain allowable subject matter. However, in light of the following remarks, Applicants respectfully submit that all presently pending claims are in condition for allowance.

### **II. THE 35 U.S.C. § 102(b) REJECTION SHOULD BE WITHDRAWN**

Claims 1 and 7-9 stand rejected under 35 U.S.C. §102(b) for being anticipated by Erdem et al. (U.S. Patent 5,982,909).

Claim 1 recites, “[a] method of registering a first image and a second image, the method comprising the steps of selecting, by an image processing device, at least one first landmark in the first image; selecting, by an image processing device, at least one second landmark in the second image, wherein the at least one first landmark corresponds to the at least one second landmark; and registering, by an image processing device, the first and second images by using a similarity value which relates to a similarity of a first region in the first image determined by the at least one first landmark and a second region in the second image determined by the at least one second landmark, *the registering including selecting at least one further first landmark in the first image and at least one further second landmark in the second image as a function of a pre-selected value of the similarity value.*”

Erdem discloses tracking a predetermined, 2D portion of an image throughout a sequence of images. (*See Erdem*, Abstract). Erdem uses a reference frame (14) with mesh elements (22) and nodes (23). (*Id.* at col. 3, l. 53 – col. 4, l. 32, Figs. 2-4). Subsequently, this reference mesh is mapped onto a current frame (114). A mesh (121) for the current frame is, thus, acquired with modified boundary elements (121) to properly fit the current frame. (*Id.* at col. 17, ll. 41-45, Fig. 20). Erdem discloses that “new inside and boundary nodes...are added to the mesh 121 half way on each link 140

that connect two nodes 123 in the mesh 121.” (*Id.* at, col. 17, ll. 46-49). Next, hexagonal search and corner refinement (50) is conducted to further refine the mesh.

The Examiner refers to Erdem’s addition of new inside and boundary nodes to meet the recitation of “*the registering including selecting at least one further first landmark in the first image and at least one further second landmark in the second image as a function of a pre-selected value of the similarity value*” in claim 1. Specifically, the Examiner states that the nodes in Fig. 20c,d which are not in Fig. 20a are equivalent to “*the registering including selecting at least one further first landmark in the first image*” and that the nodes in Fig. 20c,d which are not in Fig. 20b are equivalent to *at least one further second landmark in the second image as a function of a pre-selected value of the similarity value.*” Applicants respectfully disagree with the Examiner’s interpretation of Erdem. As previously stated, the reference mesh shown in Fig. 20a is tracked into the current frame (114), in which the current mesh (121) is obtained. (*See Erdem*, col. 17, ll. 41-45, Fig. 20). The new inside and boundary nodes (141) are added to this mesh in Fig. 20c. Subsequently, the position of the nodes (141) of the high-resolution mesh in Fig. 20c is refined and the result is shown in Fig. 20d. So, although new nodes are introduced in Fig. 20c, Fig. 20d does not show any new nodes not present in Fig. 20c, but rather the same nodes in different positions. In contrast, claim 1 recites “*the registering including selecting at least one further first landmark in the first image and at least one further second landmark in the second image as a function of a pre-selected value of the similarity value.*” Accordingly, the 35 U.S.C. §102(b) rejection of claim 1 and its dependent claim 10 should be withdrawn.

Independent claims 8 and 9 recite a similar limitation as described above for claim 1. Accordingly, the 35 U.S.C. §102(b) rejection of these claims should be withdrawn.

### **III. THE 35 U.S.C. § 103(a) REJECTION SHOULD BE WITHDRAWN**

Claim 7 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Erdem in view of Moshfeghi (U.S. Patent 5,633,951).

Applicants respectfully submit that Moshfegi fails to cure the above-mentioned deficiencies of Erdem and that Erdem and Moshfegi, alone or together, fail to disclose or suggest “the registering including selecting at least one further first landmark in the first image *and at least one further second landmark in the second image as a function of a pre-selected value of the similarity value,*” as recited in claim 1. Because claim 7 depends on and, therefore, contains all of the limitations of claim 1, it is respectfully submitted that claim 7 is allowable.

**CONCLUSION**

In light of the foregoing, Applicants respectfully submit that all of the presently pending claims are in condition for allowance. All issues raised by the Examiner having been addressed. An early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

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